WHAT IS CLAIMED IS:

1.    A   method   of   inspecting   a   photomask   for   a semiconductor integrated circuit formed based on drawing pattern data,  comprising the steps of:

5        classifying   a   drawing   pattern   of   the   semiconductor integrated circuit into a plurality of ranks in accordance with a reference depending on a feature of the drawing pattern and extracting the same;

    determining inspecting accuracy for each of the ranks;

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    deciding quality of the photomask depending on whether the determined inspecting accuracy is satisfied for each drawing pattern thus extracted.

15        2.    The method of inspecting a photomask according to claim 1, wherein the reference is a functional feature of the drawing pattern, and

    the extracting step serves to classify the drawing pattern into a plurality of ranks and to extract the same depending on

20   a circuit-functional feature of a pattern formed by the drawing pattern.

    3.    The method of inspecting a photomask according to claim 2, wherein the extracting step includes a step of

25   classifying the drawing pattern of the semiconductor integrated circuit into a plurality of ranks and a step of extracting the same depending on whether the drawing pattern is a dummy pattern.

    4.    The method of inspecting a photomask according to

30   claim 3, wherein the extracting step further includes a step of classifying the drawing pattern into a plurality of ranks depending on whether a pattern adjacent to the drawing pattern is a dummy pattern.

35        5.    The method of inspecting a photomask according to claim 1, wherein the extracting step a step of classifying the

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drawing pattern of the semiconductor integrated circuit into a plurality of ranks and to extract the same depending on whether the drawing pattern has the same node.

6. The method of inspecting a photomask according to claim 1, wherein the reference is a feature of a shape of the drawing pattern, and

the extracting step includes a step of classifying the drawing pattern into a plurality of ranks and to extract the same depending on the feature of the shape of the drawing pattern.

7. The method of inspecting a photomask according to claim 6, wherein the extracting step serves to classify the drawing pattern into a plurality of ranks and to extract the same based on a distance from the closest pattern.

8. The method of inspecting a photomask according to claim 6, wherein the extracting step serves to classify the drawing pattern into a plurality of ranks and to extract the same based on a distance from a corner of the drawing pattern.

9. The method of inspecting a photomask according to claim 1, wherein the extracting step serves to classify the drawing pattern into the ranks and to extract the same depending on the reference for each pattern.

10. The method of inspecting a photomask according to claim 1, wherein the extracting step serves to classify the drawing pattern into the ranks and to extract the same depending on the reference for each pattern edge.

11. The method of inspecting a photomask according to claim 1, wherein the extracting step serves to classify the drawing pattern into the ranks and to extract the same depending on the reference for each area.

12. The method of inspecting a photomask according to claim 1, wherein the deciding step serves to change an accuracy condition depending on an increase or decrease in a pattern width.

13. The method of inspecting a photomask according to claim 1, wherein the deciding step serves to detect whether the drawing pattern is a dummy pattern and to relax the accuracy condition when the drawing pattern is the dummy pattern.

14. The method of inspecting a photomask according to claim 13, wherein the deciding step serves to further relax the accuracy condition when a pattern adjacent to the drawing pattern is the dummy pattern.

15. The method of inspecting a photomask according to claim 1, wherein the deciding step serves to detect whether at least two patterns have the same node and to relax the accuracy condition when they have the same node.

16. The method of inspecting a photomask according to claim 1, wherein the deciding step serves to detect whether at least two patterns have the same node based on a pattern in the same layer and to relax the accuracy condition when they have the same node.

17. The method of inspecting a photomask according to claim 1, wherein the deciding step serves to detect whether at least two patterns have the same node by a contact through a pattern in a layer positioned on or under the layer, and to relax the accuracy condition when they have the same node.

18. The method of inspecting a photomask according to claim 1, wherein when the drawing pattern is a wiring pattern including a contact array,
the deciding step serves to detect whether one contact array or more is/are taken and to change the accuracy condition

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depending on whether one contact array or more is/are taken.

19. The method of inspecting a photomask according to claim 1, wherein when the drawing pattern is a pattern for forming a contact hole,

the deciding step serves to detect whether one contact array or more is/are taken and to change the accuracy condition depending on whether one contact array or more is/are taken.

20. The method of inspecting a photomask according to claim 1, wherein the feature is a relational expression of a manufacturing defect density and a manufacturing defect size, and

the extracting step includes a step of classifying the drawing pattern into two ranks and a step of extracting the same depending on whether a critical point determined by an intersection of the relational expression of the manufacturing defect density and the manufacturing defect size in a photomask and a relational expression of a pattern area weighed by a manufacturing defect generation probability on a pattern and the manufacturing defect size is exceeded based on the critical point.

21. An apparatus for inspecting a photomask for a semiconductor integrated circuit formed based on drawing pattern data, comprising:

means for classifying a drawing pattern of the semiconductor integrated circuit into a plurality of ranks in accordance with a predetermined feature reference and extracting a plurality of pattern data;

means for determining inspecting accuracy which is required for each of the ranks and generating accuracy data; and

means for deciding whether the pattern data satisfy the accuracy data for each of the classified pattern data.

22. Inspecting data of a photomask for a semiconductor integrated circuit formed based on drawing pattern data, comprising:

a plurality of pattern data extracted by a classification

5 of a drawing pattern of the semiconductor integrated circuit into a plurality of ranks in accordance with a predetermined feature reference; and

accuracy data indicative of inspecting accuracy which is required for each of the ranks.

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23. A method of generating inspecting data of a photomask for a semiconductor integrated circuit formed based on drawing pattern data, comprising the steps of:

classifying a drawing pattern of the semiconductor

15 integrated circuit into a plurality of ranks in accordance with a predetermined feature reference and extracting a plurality of pattern data; and

determining inspecting accuracy which is required for each of the ranks and generating accuracy data.

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